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Research Paper

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Audience: Anyone concerned with the field of autism studies

Unearthing the Cause of the Autism Explosion

In 1970, a rare one child out of every 10,000 births was diagnosed with the little known disorder called autism (Stenson, 2011). But now, statistics from the Center of Disease Control show that one in every 110 children is being diagnosed with autism. Researchers, doctors, and parents alike are all asking the same question: what is causing the increase in the prevalence of autism? Experts are concluding that there is no definite cause of the rise in diagnoses due to the variability of the condition. It can be concluded that the prevalence of autism is rising due to a variety of factors affecting American society. These include increased awareness of autism, social factors, and environmental factors.

Autism is classified as a spectrum disorder, meaning there is a wide range of characteristics and abilities that are all considered autistic. It also means that there is a spectrum of autism, so that one can be a little or very autistic. However, this was not always the case. “In 1994, DSM-IV[[1]](#footnote-1) broadened the diagnostic definition for autism and potentially related disorders, such as Autistic Disorder, Asperger Syndrome, and Pervasive Developmental Disorder-Not Otherwise Specified” (or “atypical autism”) (Scahill). Because there is such a wide range of people who are considered to have an Autism Spectrum Disorder, it is beginning to include more and more people as researchers and doctors learn more about the disorder. It is inevitable that if the classification of a disorder is broadened, the prevalence of that disorder will rise.

Many researchers state that the overall “greater recognition, with changes in diagnostic practice associated with more trained diagnosticians, a greater willingness by parents and educationalists to accept the label and better recording systems, (among other factors) are the main reasons we see the prevalence of autism skyrocketing (Novella). Parents are becoming more and more aware of the symptoms of the disorder and are more apt to bring their child in for screening. During this screening diagnosis, one of the traits that is measured is intelligence. If a child has an IQ lower than 70, they are considered to be mentally retarded. However, previously, many children who had mental retardation as well as autism were not included in the autism statistics they were simply considered mentally retarded. It was very difficult to determine whether children were affected by both conditions, or only one. Now, it is easier for doctors to distinguish between the conditions and more accurately assess the child’s disorder. In fact, in areas where the number of people with autism rose, respectively the prevalence of people with other disabilities dropped (Novella). Also due to the fact that autism now has such a wide range from low to high-functioning children, oftentimes they were diagnosed with a different condition. For example, many children who had higher-functioning autism may have been diagnosed as just having a moderate psychogenic disorder rather than autism (Scahill). However, children diagnostics are not the only thing change in the autism world. Socially, lifestyles are changing across America, bringing large risks for having a child with autism.

The changing American family has also begun to play a large role in the staggering increase in numbers of children with autism. A believed cause of autism in some children is the age of the mother during pregnancy. Mothers between ages 30 and 34 were shown to have a 27% greater chance of having a child with autism than mothers under the age of 30 (BBC). Furthermore, mothers over 40 are 51% more likely to have a child with autism (Scientific American). As for fathers, their chances of having a child with autism grew by 4% every five years of their life (BBC). This contributes heavily to the increased diagnosis of autism**,** because it is a recent trend for couples to have children later in their marriages. This is due to an increased desire for higher education, postponement of marriage, the changing role of women in society, and vocational changes (Berk). In addition to increasing maternal age, other social factors are contributing to the rise in the prevalence of autism. In addition to the “shift toward having babies later in life, more premature births, and growing use of fertility treatments—all of which are risk factors for developmental disabilities—could be contributing to the higher rates, the researchers say” (Huffington Post). Likewise, in a research study conducted by Columbia University in 2010, it was shown that children who lived in close proximity to a child diagnosed with autism, had a higher chance of being diagnosed with autism themselves. This can be explained simply by information diffusion. Concerned parents of children with autism often educate other parents about their own child’s increasing risk of having autism, and more parents will take precautions to check their baby for autism. Many researchers are now pointing to signs of environmental risk factors, such as chemical exposure and diet, as being directly related to the increasing maternal age.

Studies are now examining the possibility that the “mother's longer cumulative exposure to unknown environmental factors” may be even further increasing their chances to have a child with autism. This may include many toxins, such as mercury found in seafood and other chemical-based products. The longer a women waits to bear a child, the longer her body is absorbing and ingesting harmful chemicals.

Nowadays it seems as though almost everything has something bad for you in it. And to an extent, this is true. It has too many trans fats, its a carcinogen, it will raise your cholesterol. But unfortunately, these things are sometimes very hard to avoid. However, it becomes very important when all these additives and toxins begin to affect your body, and even your baby if you are pregnant. Studies have shown than many products, foods, or even environmental chemicals that the mother intakes can be linked to causing autism in her child. Many toxins, such as lead, hormones, and mercury can be passed through the placenta and to the baby’s brain and organs. Many mothers report incidents of eating large amounts on fish, such as tuna fish, during their pregnancy, which contains high amounts of mercury (Wilson). 58% of a sample group of mothers with children with autism accounted consuming more than 2 servings of seafood per month, during pregnancy, in contrast with only 33% of mothers having typical children (Autism Research Institute). Similarly, it was found that there as 57% more mercury in the hair of a mother with a child with autism than mothers with typical children (Autism Research Institute). Also, more and more pesticides containing lead and cadmium are being sprayed on produce and hormones are being added to meats and dairy products. By ingesting these foods, mothers are putting their children at risk for developing autism. Other than food, toxin-containing medicine, both prescription and over-the-counter, are widely used by women, even more so than by men (Wilson). In several tissue mineral analyses done on children with autism, and their parents, consistent findings show toxic levels of heavy metals (Wilson). In a research study done to assess the possible association of the severity of autism and toxic metal body burden, findings concurred “multiple positive correlations were found between the severity of autism and the urinary excretion of toxic metals” (Laks). In fact, many observations of children with autism are extremely similar to characteristics of children affected my mercury poisoning. “Mercury can induce all three of the autism diagnostic criteria: impairments in social interaction, communication difficulties, and repetitive and stereotyped patterns (Laks). In fact, “every major characteristic of autism has been exhibited in at least several cases of documented mercury poisoning” (Laks).  Investigating this finding further, some began pointing fingers at vaccines; specifically the preservative found in vaccines known as thimerosal. However, twelve different studies were conducted, all denouncing any link between the preservative and autism. Still, skepticism rose and many mothers began to opt out of vaccinations. Fearing the consequences of unvaccinated children, thimerosal was removed from all vaccines except the influenza vaccination. But still the numbers continue to rise. Many still believe that the toxins and viruses in vaccines are causing this developmental disorder, and the rise in numbers is proof that there are more harmful substances in vaccines with the removal of thimerosal.

Since its first case in 1943, autism has been an extremely mysterious disorder. Even today there is no known cause of autism, nor one definite reason for the sudden increase in cases (Wilson). As discussed, there are several theories that together, or possibly separately, could explain the reason behind the climb in the number of children being diagnosed with autism. As people become more and more aware of this once rare disorder, more children are becoming diagnosed every day. Paired with the socially changing world of families and society, the evolving environment too is starting to affect the number of children developing autism. Although there is no cure discovered for autism or its sudden outbreak, researchers are working to inform the public and find a solution for this devastating disability.

Works Cited

Adams, J. B., M. Baral, and E. Geis. “The Severity of Autism Is Associated with Toxic Metal Body Burden and Red Blood Cell Glutathione Levels.” *Journal of Toxicology* 2009 (2009): n. pag. *Academic Search Alumni Edition*. Web. 25 Oct. 2011. <http://www.hindawi.com/‌journals/‌jt/‌2009/‌532640/>.

Berk, Laura E. *Exploring Lifespan Development*. Boston: Pearson, 2010. Print.

“CDC: Autism, ADHD Rates on the Rise.” *The Huffington Post*. N.p., n.d. Web. 24 Oct. 2011. <http://www.huffingtonpost.com/‌2011/‌05/‌23/‌cdc-autism-adhd-rates-on-\_n\_865769.html>.

Gillberg, Christopher. “Maternal Age and Infantile Autism.” *Journal of Autism and Developmental Disorders*: n. pag. *Springer Link*. Web. 24 Oct. 2011. <http://www.springerlink.com/‌content/‌m5814t073m776r12/>.

*Heavy Metal Exposures, Developmental Milestones, and Physical Symptoms in Children with Autism*. Autism Research Institute, n.d. Web. 21 Oct. 2011. <http://www.autism.com/‌pro\_research\_metalexposure.asp>.

Laks, Dan R. *Environmental Mercury Exposure and the Risk of Autism*. N.p.: n.p., 2008. *Safe Minds*. Web. 18 Oct. 2011. <http://www.safeminds.org/‌pubs/‌Environmental%20Mercury%20Exposure%20and%20the%20Risk%20of%20Autism%20Aug%202008.pdf>.

Liu, Kayuet, Noam Zerubavel, and Peter Bearman. “Social Demographic Change and Autism.” *Demography* 47.2 (2010): 327-343. *Project MUSE*. Web. 26 Oct. 2011. <http://muse.jhu.edu/‌journals/‌demography/‌v047/‌47.2.liu.html>.

Moisse, Katie. “Study Confirms Link between Older Maternal Age and Autism.” *Scientific American*: n. pag. Web. 24 Oct. 2011. <http://www.scientificamerican.com/‌article.cfm?id=autism-maternal-age>.

“No Evidence That MMR Vaccine Causes Autism.” *National Network for Immunization Information*. N.p., 2010. Web. 24 Oct. 2011. <http://www.immunizationinfo.org/‌science/‌no-evidence-mmr-vaccine-causes-autism>.

Novella, Steven. “The Increase in Autism Diagnoses: Two Hypotheses.” *Science-Based Medicine*. N.p., n.d. Web. 21 Oct. 2011. <http://www.sciencebasedmedicine.org/‌index.php/‌the-increase-in-autism-diagnoses-two-hypotheses/>.

“Problem Pregnancy ‘Autism Risk.’” *British Broadcasting Channel*. N.p., n.d. Web. 24 Oct. 2011. <http://news.bbc.co.uk/‌2/‌hi/‌health/‌8126574.stm>.

Scahill, Lawrence. “Autism Is Not an Epidemic.” *Pediatric News* 42 (Apr. 2008): 24. *ProQuest Nursing Journals*. Web. 26 Oct. 2011.

Stenson, Jacqueline. “As autism cases sore, a search for clues.” *MSNBC*. N.p., n.d. Web. 24 Oct. 2011. <http://www.msnbc.msn.com/‌id/‌6947652/‌ns/‌health-mental\_health/‌#.TqWMiWChBl0>.

“What Is Causing the Increase in Autism Prevalence?” *Autism Speaks Official Blog*. Autism Speaks, 22 Oct. 2010. Web. 26 Oct. 2011. <http://blog.autismspeaks.org/‌2010/‌10/‌22/‌got-questions-answers-to-your-questions-from-the-autism-speaks’-science-staff-2/>.

Wilson, Lawrence. “The Autism Epidemic and Natural Soultions.” *Dr. L Wilson*. The Center for Human Development, Mar. 2011. Web. 18 Oct. 2011. <http://www.drlwilson.com/‌articles/‌AUTISM.htm>.

1. Diagnostic and Statistical Manual of Mental Disorders, fourth edition, a comprehensive classification of officially recognized psychiatric disorders [↑](#footnote-ref-1)